

REMARKS/ARGUMENTS

This is a response to the Final Office Action dated July 21, 2009 and the Advisory Action dated November 6, 2009. The response is being submitted with a Request for Continued Examination. (Note: The claims herein are verbatim copies of the previously submitted claims.)

Claims 1-9 are pending in the Application. All claims were rejected in the final Office Action. Applicants amend Claims 6-9 and respectfully request a reconsideration of the rejections. Claims are being amended for reasons of clarity and not patentability.

Claims 1-5 were rejected under 35 U.S.C. §103(a) as being unpatentable over Tomohide (JP07-295720) in view of Shimabukuro (2003/0092400). Claims 6-9 were rejected under 35 U.S.C. §103(a) as being unpatentable over Tomohide in view of Bogward (US 2004/0049743).

Claim 1 recites a mobile information terminal having a surface with a display and a surface opposite the display surface. This opposite surface includes a plurality of operation keys and a plurality of finger position detecting mechanisms associated with the operation keys. As recited in Claim 1, the finger position detecting mechanisms detect “that a finger of an operator is placed on one of said operation keys even if none of said operation keys is fully depressed.” This limitation of Claim 1 is not disclosed in the cited prior art.

The Examiner stated in the Final Office Action that Tomohide teaches a mobile terminal which includes “finger position detecting mechanisms for detecting that a finger of an operator is placed on each of said operation keys ..., and a control section to which signals from said operation keys and said finger position detecting mechanisms are entered and which can control the operation of said display device.” See, Final Office Action, page 3. Applicants respectfully disagree and submit that Tomohide does not teach or even suggest the finger position detecting mechanisms or the control section of Claim 1.

With respect to the finger position detecting mechanisms for detecting that a finger of an operator is placed on each of the operation keys Tomohide et al. discloses a key and switch on thumb field 11, a touch sensor 8 and a keyboard 2. See, Tomohide, par. [0016]-[0020]. As would have been obvious to a person skilled in the art, keyboard 2 of Tomohide is equivalent to the operating keys limitation of Claim 1 but not to the “finger position detecting mechanisms” of Claim 1. Moreover, while keyboard 2 (as any other typical keyboard known in the art) is capable

of detecting that a particular key is fully depressed, nothing in Tomohide teaches or suggests that the keyboard is capable of detecting that a finger of an operator is placed on each of the keys on the keyboard 2, as required by Claim 1.

With respect to the “key or switch on thumb field 11,” Tomohide discloses that field 11 is a field which can be reach by both thumbs of a user in a situation in which the user holds the mobile information terminal with both hands. See, Tomohide, par. [0016]. Specifically, thumb field 11 is defined as a space between a side edge (left or right) of the display and a corresponding side edge of the mobile terminal (i.e., part of the same surface that includes the display) or as part of the space located immediately above the display. See, Tomohide, par. [0016] and Fig. 1. Therefore, Tomohide clearly teaches that the thumb field 11 is remotely positioned from the keys of the keyboard 2 that are located on a reverse side from the surface having the display 1. See, Tomohide, Figs 1 and 2. Accordingly, it is impossible to detect that a finger of an operator is placed on each of the keys of keyboard 2 using the key or switch on thumb field 11. Therefore, the key or switch on thumb field 11 is not equivalent to the “finger position detecting mechanisms” of Claim 1.

Finally, the touch sensor 8 of Tomohide is arranged such that the surface of the display 1 is covered by the touch sensor 8. See, Tomohide, par. [0019]. Therefore, similarly to the switch on thumb field 11, touch sensor 8 is distanced from the keys of the keyboard 2 by being located on the side of the terminal opposite from the side containing the keyboard. Thus, it is impossible to detect that a finger of an operator is placed on each of the keys of keyboard 2 using the touch sensor 8. Therefore, the touch sensor 8 is not equivalent to the “finger position detecting mechanisms” of Claim 1.

Therefore, Tomohide does not disclose the finger position detecting mechanisms for detecting that a finger of an operator is placed on each of the operation keys located on a surface reverse from the surface having the display, as recited in Claim 1.

Moreover, since Tomohide does not disclose finger position detecting mechanisms, the reference cannot teach a control section which detects operator’s finger position according to an input signal from such finger position detecting mechanisms. Therefore, Tomohide does not teach or even suggest the control section as recited in Claim 1.

Shimabukuro does not remedy the above deficiency of the Tomohide reference. Specifically, keys 303-309 disclosed in Shimabukuro are not equivalent to the operation keys recited in Claim 1 because they are not positioned on a surface reversed from the surface containing the display. Instead, keys 303-309 are positioned on the same side of the terminal as the display. See, Shimabukuro, Fig. 3. Therefore, in Shimabukuro, it is impossible to use a structure which detects that a finger of the operator is placed on each of the keys positioned on a reverse side of the surface having the display. Thus, Shimabukuro does not teach or even suggest using finger position detecting mechanisms for detecting that a finger of an operator is placed on each of the operation keys located on a surface reverse from the surface having the display, as recited in Claim 1.

Further, the Examiner stated in the Office Action that it would have been obvious to a person skilled in the art to modify Tomohide to include finger position detecting mechanisms to detect that a finger of an operator is placed onto one of the operation keys even if none of the operation keys is fully depressed for the purpose of facilitating key operation as taught by Shimabukuro in at least paragraph [0002]. Paragraph [0002] of Shimabukuro states that the disclosed cellular phone performs “display control on a function explanation according to each key.” Shimabukuro, par. [0002]. Thus, the object of Shimabukuro is to provide a cellular phone that can facilitate knowledge of a particular key function by displaying a function explanation before the key is fully pressed. By contrast, the object of the invention claimed in Claim 1 is to provide a mobile information terminal that facilitates knowledge of a location relationship between a finger of a user and the operation keys which are positioned on a surface located on the reverse side of the surface having the display and which are, therefore, cannot be visually recognized by the user. Therefore, the detection mechanism of Shimabukuro differs from the finger position detecting mechanisms of Claim 1 in purpose and structure.

Finally, since Shimabukuro does not disclose finger position detecting mechanisms, the reference cannot teach a control section which detects operator’s finger position according to an input signal from such finger position detecting mechanisms.

Accordingly, neither Tomohide nor Shimabukuro, either individually or combined, disclose or suggest the finger position detecting mechanisms of the control section of Claim 1. Therefore Claim 1 is allowable over the cited prior art.

Since each of Claims 2-6 is directly or indirectly dependent upon independent Claim 1, each of Claims 2-6 is allowable at least for the same reasons as Claim 1 and further on its own merits.

Moreover, dependent Claim 6 recites a gravity sensor which is not disclosed or even suggested by the prior art of record, as explained below with respect to Claim 7.

Claim 7 recites a gravity sensor which detects whether gravity is applied in a direction from the front surface, i.e., the surface having the display, to the rear surface, i.e., the reverse surface to the display surface, or in a direction from the rear surface to the front surface. With respect to Claim 7, the Examiner indicated in the Office Action that “if the prior art structure is capable of performing the intended use, then it meets the claim.” However, Bogward is not “capable of performing the intended use.”

Specifically, Bogward discloses a semi-circular gravity sensor and a rectangular gravity sensor in Figs. 81, 82, 83A-83C and 84A-84E. The semi-circular gravity sensor of Bogward detects an angle of inclination of a leaf of the device in a situation in which gravity is always applied from a display surface to its reverse surface. However, the same sensor cannot detect an angle of inclination of the display device in a situation when gravity is applied from the reverse surface to the display surface because of the structure of the semi-circular sensor. Further, the sensor cannot detect whether gravity is applied in a direction from the reverse surface to the display surface. In other words, when the leaf is turned upside-down, the sensor does not work.

Further, the rectangular gravity sensor of Bogward detects the direction of the leaf by detecting gravity vector component in parallel with the display surface. However, the same sensor cannot detect gravity vector component perpendicular to the display surface. So it cannot detect if the gravity is applied from the display surface to the reverse surface or from the reverse surface to the display surface. There is simply no additional slot for the ball of the rectangular sensor that would correspond to such direction. Therefore, the limitation of Claim 7 reciting the gravity sensor which detects whether gravity is applied in a direction from the rear surface to the

front surface, is not disclosed in Bogward. Therefore, Claim 7 is allowable over the cited prior art.

Since Claim 8 is (indirectly) dependent upon independent claim 1 and Claim 9 upon independent Claim 7, each of Claims 8-9 is allowable at least for the same reasons as Claims 1 and 7 and further on its own merits. Reconsideration of the rejection is respectfully requested.

In view of the foregoing amendments and remarks, allowance of Claims 1-9 is respectfully requested.

Accordingly, the Examiner is respectfully requested to reconsider the application, allow the claims as amended and pass this case to issue.

Respectfully submitted,

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